

FRIDAY FLYER – NOVEMBER 2, 2012

Something to share—an interesting research project or kudos for a student, teacher or mentor?
Contact Kris Whelan.

CENTER SPOTLIGHT: Johns Hopkins University -

<http://www.compadre.org/ptec/quarknet/QuarkNet.cfm?ID=131>

Contact Bruce Barnett (bab@jhu.edu) for tips on how to recruit and facilitate a workshop with a large number of teachers.

Active since 2002, in 2012 physicists in the Johns Hopkins University QuarkNet Center hosted 25 teachers, a mix of veteran and those new to QuarkNet. As is standard from past years, the teachers came from a wide variety of backgrounds. There were both male and female teachers representing Baltimore City and non-Baltimore City schools, public and private schools, single sex and regular schools, secular and religious schools, as well as schools from both Maryland and Pennsylvania.

The workshop format included talks in the morning and “lab” in the afternoon. The talks extended beyond experimental and theoretical particle physics and included future astrophysics experiments: dark matter cosmology; the biochemistry of soils; the construction and testing of new condensed matter materials; the study of massive black holes; sources of information about astrophysics on the web; teaching in the STEM area; and, of course, the status of the LHC accelerator, experiments and Higgs searches. Speakers were from the JHU faculty and research staff. Several QuarkNet veteran teachers also gave talks to the group including Kevin Wolf, who reported on his trip to CERN (for the HST workshop) and the excitement of being there July 4 when the Higgs data was presented. During the afternoon, teachers learned how to assemble and utilize QuarkNet cosmic ray detectors. They also learned how to use the CMS e-Lab.

Time was allocated for the teachers to discuss other ways to get their students more interested in science. JHU particle physicists, along with several QuarkNet teachers and their students, have joined the CERN International Masterclass program. The other teachers found this to be very interesting and expressed a desire to include their students in 2013. In addition, there was increasing enthusiasm from the teachers in becoming more involved in the 2013 Johns Hopkins Physics Fair, an annual activity originated by JHU QuarkNet teachers in 2004.

Resource of the Week - Fermilab Education Office

<http://ed.fnal.gov/>

Over the years, Fermilab has developed and shared educational resources for all grade levels. These resources include hands-on activities, videos, and online experiments. Browse through this extraordinary website and learn what’s been cooking at FNAL.

Physics Experiment Roundup - What else could the Higgs be?

<http://www.symmetrymagazine.org/article/october-2012/what-else-could-the-higgs-be>

“According to the Standard Model, the mass of the Higgs boson should be enormous. But recent experimental results suggest it’s quite small, indicating that scientists might need to go beyond the Standard Model to explain the new particle.” – from *symmetry* magazine, October 30, 2012

Just for Fun - Virtual Visits

http://www.uslhq.us/Resources/Virtual_Visits

“Though you may not be able to visit the detectors in person, you can visit four of the LHC experiments virtually. The ALICE, ATLAS, CMS, and LHCb virtual visits give you a panoramic 360 view of the detectors.” – US/LHC Resources

Ken Cecire, kcecire@nd.edu
Tom Jordan, jordant@fnal.gov

Bob Peterson, rspete@fnal.gov
Kris Whelan, kkwhelan@uw.edu